



Safety Analysis at United Airlines

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Safety Analysis at United Airlines

- **Fundamental Principles of Safety:**
 - **Fine The Truth**
 - **Facilitate Change**
 - **Include All Stakeholders in both Processes**



Safety Analysis

- **Find the Truth -- Sources**
 - Internal Audits
 - Government Audits
 - Accident & Incident Inquiries
 - FOQA
 - Employee Safety Reporting System
 - Maintenance and Engineering Report Systems



Safety Inquiries

- **Safety Issues Identified through Audits or Accidents Generate Formal Safety Inquiries**



Inquiry Process

- **Form an Inquiry Team**
 - **Independent Facilitation**
 - **Safety or Quality assurance**
 - **People close to the specific Operation**
 - **Review for All Stakeholders**



Inquiry Process (continued)

- **Gather Information from all Possible Sources**
 - **Flight Recorders, FOQA**
 - **Flight Crew, Maintenance Technicians,**
 - **Employee Report System**
 - **Training Center**
 - **Other Airlines, manufacturers, government**



Inquiry Process (continued)

- **Agree to findings and Recommendations**
- **Facilitate Action**
 - Short and Long Term Remediation
- **Follow-Up Process**
 - Safety /review Board
 - Quarterly Safety /review
- **Share the Results on "Need to Know Basis"**



FOQA Analysis

- **Automated Scanning for Alert Parameters in Flight Data**
 - **Metrics Determined by Multi-Disciplinary “Technical Team”**
 - **Significant Trends Reviewed By Safety and**
 - **Flight Standards Review Board**
 - **Specific Fleet Flight Management**
 - **Fleet Engineering**
 - **UAL Air Traffic Control Group**



FOQA Analysis

- **Significant Events**
 - **Flight Operations Related**
 - **Peer Review with Crew**
 - **Individual Remediation**
 - **Trends Reported to Steering Committee for Special Team Action**
 - **Maintenance or Engineering Related**
 - **Appropriate Maintenance**
 - **Engineering, Safety Trend Analysis**



Pilot Reporting System

- **9,500 reports submitted per year**
- **Reports can be submitted electronically and via paper**
- **Flight Safety accomplishes “First Look Analysis”**
- **Information and initial response from management person closest to issue**
- **Follow-Up by Retired Pilots**



Pilot Reporting System

- **Trend Analysis by Category**
 - Assigned to Entity Closest to the Specific Operation
- **Individual Reports Summarized and Published Weekly**
 - To Stakeholders
 - Shared with FAA
- **Quarterly Trend Review**
 - Stakeholders
 - Senior Management



Engineering & Maintenance

- **AMIS (Aircraft Maintenance Information System) write-ups**
- **BRIA query - ATA chapter search**
- **Chronic aircraft monitoring system and chronic component alert system.**



Engineering and Maintenance

- **Track/report results from heavy maintenance visits**
- **Conduct a quarterly reliability review.**
- **Conduct a daily review of all delays and maintenance problems.**



Summary

- **Safety=Reliability=Quality**
 - **Maximum Quality and Quantity of Information**
 - **In-Depth, Efficient Analysis**
 - **By people who understand the specific operation as well as the big picture**
 - **Commitment to Corrective Action**
 - **Commitment to perpetual Review & Improvement of the Analysis Process**